

Р. А. М.  
 СЕДИНОВ (V. I.). Пятнистость абрикоса и борьба с этим заболеванием. [Spotting of Apricots and its control.]—60 pp., 7 figs., 2 diagr., Душанбе, Таджикская ССР. [State Publ. Off. Tadzhik S.S.R.], Stalinabad-Leningrad, 1940.

In studies conducted at the Scientific Research Institute for fruit, vine, and vegetable cultivation in the Tadzhik S.S.R. [Russian Central Asia] from 1935 to 1938, it was found that spotting of apricots often occurs in the absence of *Claserosporium carpophilum* [R.A.M., vii, p. 319], generally believed to be the causal agent of this disease. Inoculations with cultures of the fungus in the laboratory and field failed to cause infection of apricot fruits, and the few spots produced on the leaves did not resemble those found in nature. Isolates from diseased apricot tissues yielded a bacterium similar to *Bacterium pruni*, and the pathogenicity of this organism was proved in both greenhouse and orchard inoculations, the symptoms produced being identical with those observed on naturally infected trees. It is concluded that the spotting is caused chiefly by this bacterium, though *C. carpophilum* may play some part as well. The disease is stated to attack mainly the fruits under Tadzhik conditions, leaves and stems being affected to a lesser degree. Infection is spread by rain, branches protected by waxed bags showing only 29-4 per cent. fruits, compared with 79-1 per cent. for those protected only by gauze and 92-5 per cent. for the unprotected. It is believed that the inoculum accumulates during the winter in gumming wounds and that in spring the rains dissolve the gum and wash it on to the lower shoots, leaves, and fruits. Observations over many years show that infection occurs five to six days after the first rain following blossoming, but a period with an air humidity of not less than 70 per cent. is essential for infection to take place. Proper care of the orchards and timely removal of dead branches, tend to reduce infection. In tests in 1935 the varieties Mirsardzheli, Khourmai, and Khassak showed on the average 97, 94, and 91 per cent. spotted fruits, respectively, the corresponding figures in 1937 being 81, 84, and 28 per cent. Of these varieties the first-named is the sweetest, and according to results obtained by other workers the sweeter varieties are the more susceptible [loc. cit.].

In Russian Central Asia, and in particular in the Tadzhik S.S.R., widespread infection of apricot trees occurs every year. Data obtained from typical orchards showed that the spotting caused a reduction of 27-57 per cent. in the weight of the fruit, the average loss due to the trouble being calculated as 13-68 per cent. of the whole crop of a given tree. The disease also causes a decrease in the sugar content of the fruit and generally reduces the commercial grade.

None of the fungicides tested gave complete control of spotting, but

in 1937 trials two applications of 1 per cent. Bordeaux mixture, the first after blossoming and the second 15 days later, reduced the percentage of diseased fruit harvested from 91.9 in the untreated control to 78.3, the corresponding percentage for lime with sulphur (ground sulphur 1 to 1.5 parts, quicklime 1 to 1.5 parts, and water 100 parts) being 89.8.

SERBINOV, V. I.

SERBINOV, V. I. "Problems of Control of Stolbur Diseases in Moldavia," in Virus Diseases of Plants and Measures for Their Control, Works of the Conference on Virus Diseases of Plants 1940, Publishing House of the Academy of Science USSR, Moscow, 1941. PP. 264-266. 464.32 So8

SO: SIRA SI-90-53, 15 Dec. 1953

SERBINOV, V. I.

Honoring Professor V. V. IAKhontov. Zashch. rast. ot vred.  
1 bol. 5 no.5:62. (MIRA 16:1)

(IAKhontov, Vladimir Vladimirovich, 1900--)

Serbinova, N.I.

✓ Fermentation of feed molasses by brewer's bottom yeasts.  
N. I. Serbinova and E. V. Sokol'skaya (All-Union Sci.  
Research Inst. Alc. Ind., Kiev). *Mikrobiologiya* 12, 695-  
703 (1953).—The yeasts which ferment raffinose best are  
high-activity strains 776, N, P, B, and R of *Saccharomyces*  
*cerevisiae* from brewer's bottom yeasts. In molasses mash  
they are less active; like Eger wine yeast and strain 8  
(cider yeast), they ferment 1/2 of raffinose and no melibiose.  
At 2-3% in autolyzate they ferment raffinose completely,  
but only partially if 10% sucrose is present; in this soln.  
they ferment 1/2 to 1/3 of melibiose. Low-activity strains  
are nearly or quite inert to melibiose, apparently because  
molasses (even with sucrose added) is not an adequate  
nutrient medium. Julian F. Smith

SERBINOVA, N.I.; SOKOL'SKAYA, Ye.V.

Bacteriophage of lactic acid bacilli of the *Lactobacillus plantarum* type. *Mikrobiologiya* 23 no.4:424-430 J1-Ag '54. (MIRA 7:9)

1. Kiyevskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta spirtovoy promyshlennosti.

(LACTOBACILLUS,  
plantarum, bacteriophage)  
(BACTERIOPHAGE,  
of *Lactobacillus plantarum*)

SERBINOVA, N. I.

724  
L-4785. Conditions of breakdown of raffinose in molasses. N. I. Serbinova and E. V. Sokolskaja. *Trud. Kiev fil. Inst. spir. Prov.*, 1955, No. 2, 97-107; *Referat. Zh. biol. Khim.*, 1956, Abstr. No. 15945. The reasons for the non-breakdown in a medium of molasses, of melibiose formed by the partial hydrolysis of raffinose, were investigated. Melibiose is not broken down by wine-yeast because this does not contain melibiase. Bottom brewers' yeast grown in a complete malt medium forms an active melibiase. Such yeast used in large quantity (140 million cells 1 ml.) in a molasses extract can break down raffinose. This bottom yeast, when cultivated in a molasses medium, lost its melibiase activity. The breakdown of raffinose in molasses media was fairly successful with yeast autolysates in the fermenting medium. (Russian)  
T. R. PARSONS.

SERBINOVA, N. I.

USSR/Chemical Technology - Chemical Products and Their Application. Fermentation Industry, I-27

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63545

Author: Serbinova, N. I., Tikhomirova, Ye. I.

Institution: None

Title: Determination of Contamination of Molasses with Microorganisms

Original

Periodical: Spirt. prom-st', 1956, No 1, 16-17

Abstract: A modified sampling for spontaneous fermentation is proposed: 5 g of molasses under study are dissolved in 100 ml sterile water, 1% of superphosphate extract is added and the sample is placed into a thermostat at 30-32°; after 24-48 hours microscopic examination is made and acidity is determined. Increase in acidity after 48 hours is 0.7-1.2° in the case of strongly contaminated molasses; up to 1.7-1.9° and higher for tainted, as compared with a maximum of 0.5° for standard molasses. Amounts of acid- and slime-producing bacteria are determined from the number of colonies that develop on molasses agar. The above stated bacteria are differentiated by the nature of the colonies.

Card 1/1



CHALENKO, Dmitriy Kalinovich; ~~SERBINOVA~~, N.I., kand.tekhn.nauk, retsenzent;  
KOVALEVSKAYA, A.I., red.; KISINA, Ye.I., tekhn.red.

[Microbiological control of wine making] Mikrobiologicheskii  
kontrol' vinodeliia. Moskva, Pishchepromizdat, 1960. 142 p.  
(MIRA 14:4)

(Wine and wine making--Microbiology)

SERBINOVA, N.I.; Prinimali uchastiye: LESHCHINSKAYA, I.B., diplomant;  
BUX, T.T., diplomant; MAKSIMOVA, I.B., laborant.

Conditions of fermentation and the selection of pure yeast cultures  
for semisweet table wines. Trudy VNIIViV "Magarach" 9:83-95 '60.  
(MIRA 13:11)

(Wine and wine making)

(Yeast)

POPOV, K.S., kand. tekhn. nauk; GAYVORONSKAYA, Z.I.; UMANETS, V.P.;  
NILOV, V.I.; VALUYKO, G.G.; OKHREMENKO, N.S.; ZHDANOVICH,  
G.A.; DATUNASHVILI, Ye.N.; SERBINOVA, N. I.; MARCHENKO, G.S.;  
KURAKSINA, N.K.; TYURIN, S.T.; TYURINA, L.V.; KRIMCHAR, M.S.;  
RAZUVAYEV, N.I.; OGORODNIK, S.T.; MIKHAYLOV, S. M.;  
ZHILYAKOVA, O., red.; GLIKMAN, N., red.; FISENKO, A., tekhn.  
red.;

[Wine making; manual for the workers of wineries on state and  
collective farms in the Crimea] Vinodelie; rukovodstvo dlia ra-  
botnikov vinodel'cheskikh zavodov sovkhozov i kolkhozov Kryma.  
Simferopol', Krymizdat, 1960. 415 p. (MIRA 16:3)  
(Crimea--Wine and wine making)

KOVALEV, Pavel Vasil'yevich; SERBINOVA, Yelena Mikhaylovna; BOBOSHKO,  
V.N., kand.geograf.nauk, otv.red.; ALYAB'YEV, N.Z., red.;  
RUDNITSKAYA, I.T., tekhn.red.

[Laboratory exercises in the principles of soil science] Labora-  
tornye zaniatiia po osnovam pochvovedeniia. Khar'kov, Izd-vo  
Khar'kovskogo gos.univ. im. A.M.Gor'kogo, 1960. 84 p.  
(MIRA 14:3)

(Soil science)

MATVIYENKO, N.; VADIMENKO, M.; SERBINOVICH, N.K.

Master-operator of drift mining combines. Mast. ugl. 3 no. 4:23-24 Ap '54.  
(MLRA 7:5)

(Serbinovich, Nikolai Kuprianovich)

SERBINOVICH, P.P.; BOLDYREV, A.K., kandidat tekhnicheskikh nauk,  
retsensent; PREDTECHENSKIY, V.M., kandidat tekhnicheskikh nauk,  
nauchnyy redaktor; YEGOROVA, N.O., redaktor; DAKHNOV, V.S.,  
tekhnicheskiy redaktor; VORONIN, K.P., tekhnicheskiy redaktor.

[Architectural building elements] Arkhitekturnye konstruksii  
zdanii. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhi-  
tekture, 1952. 332 p. [Microfilm] (MLRA 7:12)  
(Building)

SERBINOVICH, P.P. [author]; KRASNIL'NIKOV, P.A., dotsent, laureat Stalinskoy  
premi [reviewer].

"Architectural building construction." Stroi.prom. vol. 31 no.9:46-47  
S '53. (MLRA 6:9)

(Architecture) (Building) (Serbinovich, P.P.)

BOGOSLOVSKIY, V.N.; IL'ICHEV, A.S.; SERBINOVICH, P.P.

"Planning walls and roofs of buildings by taking into consideration physical and climatic influences." V.M. Il'inskiy. Reviewed by V.N. Bogoslovskii and others. Stroi.prom. 34 no.11:50-51 N '56.  
(Building) (Il'inskiy, V.M.) (MLRA 9:12)



OSIPOV, Lav Georgiyevich, kandidat tekhnicheskikh nauk; SERBINOVICH, Pavel  
Petrovich, inzhener; KRASENSKIY, Viktor Yevgen'yevich, inzhener;  
PRIDECHENSKIY, V.M., kandidat tekhnicheskikh nauk, retsenzent;  
TREPENENKOV, R.I., kandidat tekhnicheskikh nauk, nauchnyy redaktor;  
KOTIK, B.A., redaktor izdatel'stva; PERSON, M.N., tekhnicheskii  
redaktor

[Public and industrial buildings] Grazhdanskie i promyshlennye zdaniia.  
Moskva, Gos.izd-vo lit-ry po stroit. i arkhitekt., Pt.1. [Architectural  
and structural designs and building elements] Arkhitekturno-konstruktiv-  
nye skhemy i elementy zdaniy. Pod obshchei red. L.G.Osipova. 1957.  
375 p. (MLRA 10:9)

(Building)

OSIPOV, Lev Georgiyevich, kand.tekhn.nauk; ~~SERBINOVICH, Pavel Petrovich:~~  
KRASENSKIY, Viktor Yevgen'yevich. Prinimal uchastiye SHUBIN, L.F.,  
inzh. BOLDYREV, A.K., kand.tekhn.nauk, retsenzent; MARTYNOV,  
A.P., red.; GRIGORCHUK, L.A., tekhn.red.

[Public and industrial buildings; architectural and structural  
designs and building elements] Grazhdanskie i promyshlennye  
zdanija; arkhitekturno-konstruktivnye skhemy i elementy zdani.  
Izd.2., perer. Pod obshchei red. L.G.Osipova. Moskva, Gos.  
izd-vo "Vysshaya shkola," 1961. 470 p. (MIRA 15:2)  
(Public buildings) (Industrial buildings)

SERBINOVICH, P.P.; DIZEL, I.G., Eds.

[Physics in construction: a manual for improving the qualifications of engineers and technicians by correspondence courses] Stroitel'naya fizika; uchebnoe posobie dlia zaochnoi povysheniia kvalifikatsii inzhenerno-tekhnicheskikh rabotnikov. Moskva, Vses. zaochnyi stroitel'nyi tekhnikum, 1961. 59 p.  
(NINA 1719)

STRONGIN, Semen Grigor'yevich, kand. tekhn. nauk; SERBINOVICH, Pavel  
Petrovich, dots.; BEGAK, B.A., red.

[Structural elements] Stroitel'nye konstruktsii. Moskva,  
Stroiizdat, 1964. 342 p. (MIRA 17:5)

OSIFOV, Lev Georgiyevich, kand. tekhn. nauk; SERBINOVICH, Pavel  
Petrovich; KRASENSKIY, Viktor Yevgen'yevich; Prinimal  
uchastiye SHUBIN, L.F.; KUPERSH ILT, L.S., red.

[Public and industrial buildings; architectural and  
construction designs and building elements] Grazhdanskie  
i promyshlennyye zdaniia; arkhitekturno-konstruktivnye  
skhemy i elementy zdani. Izd.3., perer. Moskva, Vys-  
shaia shkola, 1964. 483 p. (MIRA 17:8)

NIKOLAYEV, Aleksey Ivanovich; SERBINOVICH, P.P., kand. tekhn. nauk,  
retsenzent; MARTYNOVA, A.P., red.

[Building] Stroitel'noe delo. Izd.2., perer. Moskva, Vys-  
shaia shkola, 1964. 485 p. (MIRA 17:11)

1. Vsesoyuznyy zaochnyy stroitel'nyy institut (for Serbinovich).

SERBINOVICH, P.P.; BOLDYREV, A.K., kand. tekhn. nauk, retsenzent;  
OSIPOV, G.L., kand. tekhn. nauk, retsenzent; IL'INSKIY,  
V.M., kand. tekhn. nauk, retsenzent; OBLIZINA, N., red.

[Principles of structural physics; a textbook for students  
specializing in construction at the All-Union Engineering  
and Construction Correspondence Institute] Osnovy stroitel'-  
noi fiziki; uchebnoe posobie dlia studentov stroitel'nykh  
spetsial'nostei VZSI. Moskva, 1963. Sec.1-3.

(MIRA 17:8)

1. Moscow. Vsesoyuznyy zaochnyy inzhenerno-stroitel'nyy  
institut. Kafedra arkhitektury.

Serbinovskaya, E.L.

# USSR :

1130. Development of a new scheme for the qualitative analysis of cations without the use of hydrogen sulphide. E. I. Serbinovskaya (Tr. Mosk. Tekhn. In-ta Rybn. i Khim. Promyshlennosti im. Mikhoyana, 1953, [5], 185-189; *Rezerationyi Zh. Khim.*, 1954, Abstr. No. 29,293).—After separation of the silver sub-group cations, Hg, Bi, Cd, Al, Cr, Mn, Sb, Sn and Fe are pptd. by excess of  $(NH_4)_2CO_3$ ; the filtrate contains Cu, Zn, Ni, Co and As<sup>V</sup>.

E. HAYES

2

MS



L 35/1000 EWP(1)/EWP(2)/EWP(3)/EWP(4)/EWP(5)/EWP(6)/EWP(7)/EWP(8)/EWP(9)/EWP(10) IJP(c) JD  
 ACC NR: AT5027917 SOURCE CODE: UR/2536/65/000/062/0030/0037

AUTHOR: Paisov, A. I. (Candidate of technical sciences); Kolpashnikov, A. I. (Doctor of technical sciences, Professor); Kotiyeva, L. U. (Candidate of chemical sciences); Serbinovskaya, Ye. L. (Engineer); Shelamov, V. A. (Candidate of technical sciences)

ORG: Moscow Aviation Technology Institute (Moskovskiy aviatsionnyy tekhnologicheskii institut)

TITLE: Transformations occurring in aluminum powder during its heating

SOURCE: Moscow. Aviatsonnyy tekhnologicheskii institut. Trudy, no. 62, 1965. Obrabotka davleniyem legkikh splavov (Pressure working of light alloys), 30-37

TOPIC TAGS: aluminum powder, powder metal production, heating, aluminum oxide, phase composition, metal heat treatment

ABSTRACT: The investigation of the changes in the amount and composition of the oxide phase in heated Al powder is of great interest to the heating of this powder or to its briquetting in heated state, as well as to the heating of cold-pressed briquets to temperatures of 600°C and higher, performed for the purposes of degassing and sintering. The authors performed this investigation on the basis of a method proposed by L. U. Kotiyeva, since the conventional method of determining  $Al_2O_3$  in Al powder and in sintered Al powder (SAP) according to the difference between the weight of sample

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UDC: 669.017:669.7.017.3

L 15641-66

ACC NR: AT5027917

and the amount of Al metal fails to take into account the possible changes in the composition of the oxide phase due to the hydration of  $\text{Al}_2\text{O}_3$  and the decomposition of hydrated crystals. Kotiyeva's method is based on determining the content of Al metal by the customary gas-volumetric method and then titrating the solution with  $\text{H}_2\text{SO}_4$  in order to determine the total amount of Al in the suspension. The difference between the total amount of Al and Al metal reveals the amount of Al bound in oxygen compounds. The amount of  $\text{Al}_2\text{O}_3$  is then determined by calculating the bound Al in terms of  $\text{Al}_2\text{O}_3$ . On this basis it is established that, given the current conditions of the production and storage of Al powder, its oxide phase is represented by  $\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$ . In the SAP obtained by sintering and pressworking at  $450^\circ\text{--}500^\circ\text{C}$  the oxide phase is represented by monohydrate of  $\text{Al}_2\text{O}_3$  ( $\text{Al}_2\text{O}_3 \cdot \text{H}_2\text{O}$ ). If the powder or SAP is heated above  $550^\circ\text{C}$ , its oxide phase does not contain chemically bound hydrated-crystal moisture ( $\gamma\text{-Al}_2\text{O}_3$ ). The formation of  $\gamma\text{-Al}_2\text{O}_3$  is not, however, tantamount to the complete degassing of the material:  $\gamma\text{-Al}_2\text{O}_3$  is highly hygroscopic and can absorb moisture chemically, which accounts for the presence of considerable quantities of moisture in the residue. The vacuum heating of cold-pressed briquets at the rate of  $50^\circ\text{C/hr}$  results in the cessation of gas release only at  $670\text{--}680^\circ\text{C}$ . In view of the change in the composition (and hence also density) of the oxide phase during heating, the increase in its gravimetric content may be accompanied by a decrease in volumetric content. Further, prior heating in an oxidizing atmosphere for degassing purposes is allowable only in the case of properly nodulized powder; heating of non-nodulized powder leads to rapid increase

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L 15641-66

ACC NR: AT5027917

in its content of  $Al_2O_3$ . Thus the purpose of the nodulization of powder lies not only in increasing its pour weight but also in reducing its additional oxidation during hot degassing or hot briquetting. From the standpoint of additional oxidation during heating, the presence of finer fractions in the nodulized powder is undesirable. The currently produced nodulized powder contains a large proportion of finer particles and briquetting of such powder in heated state or the high-temperature sintering of cold-pressed briquets will inevitably augment the nonuniformity of distribution of the oxide phase. Orig. art. has: 6 figures.

SUB CODE: 11, 13 / SUBM DATE: none/ ORIG REF: 009/ OTH REF: 003

BC  
Card 3/3

L 22513-66

ACC NR: AP6012775

SOURCE CODE: UR/0094/65/000/009/0043/0043

AUTHOR: Bol'sham, Ya. M.; Vinogradov, A. A.; Voloobrinskiy, S. D.; Geyler, L. B.; Grudinskiy, P. G.; Dolginov, A. I.; Zil'berman, R. I.; Kazak, N. A.; Kletenik, B. I.; Knyazevskiy, B. A.; Livshits, D. S.; Mel'nikov, M. A.; Minin, G. P.; Mukoseyev, Yu. L.; Nayfel'd, M. R.; Petrov, I. I.; Ravin, V. I.; Samover, M. L.; Serbinovskiy, G. V.; Syromyatnikov, I. A.

ORG: none

TITLE: Lev Veniaminovich Litvak (on the occasion of his 60th birthday)

SOURCE: Promyshlennaya energetika, no. 9, 1965, 43

TOPIC TAGS: electric engineering personnel, electric power engineering

ABSTRACT: The noted specialist of industrial power production, Candidate of Technical Sciences, Docent of the Correspondence Power Institute Lev Veniaminovich LITVAK began his engineering activity at the Moscow Association of State Electric Stations in 1929. Later he became one of the coauthors of all the "Directives for the increase of the power factor" issued in 1954, 1955, and 1961. He published 70 scientific papers. For his successful activities in defense industries during World War II he was decorated by "Znak Pocheta." After the war he concentrated on scientific-pedagogical work and in recent years worked actively in

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L 22578-66

ACC NR: AP6012975

the Teaching-Methodological Commission of the Ministry of Higher and Intermediate Special Education USSR, for the specialty "Electrical supply to industrial enterprises and cities." Orig. art. has: 1 figure. [JPRS]

SUB CODE: 05, 10, 09 / SUBM DATE: none

Card 2/2

BK

SERBINOVSKIY, G.V., kand.tekhn.nauk

Power engineering in Europe and the U.S.A. Prom. energ. 20 no.2:47.  
52 '65. (MIRA 18:4.

SERBINOVSKIY, G.V., kand. tekhn. nauk

Equalization of the load graphs of electric power systems.  
Prom. energ. 20 no.6:37-42 Je '65. (MIRA 18:6)

BOL'SHAM, Ya.M.; VINOGRADOV, A.A.; VOLOBRINSKIY, S.D.; GEYLER, L.B.; GRUDINSKIY, P.G.; DOLGINOV, A.I.; ZIL'BERMAN, R.I.; KAZAK, N.A.; KLETENIK, B.I.; KNYAZEVSKIY, B.A.; LIVSHITS, D.S.; MEL'NIKOV, N.A.; MININ, G.P.; MUKOSEYEV, Yu.L.; NAYFEL'D, M.R.; PETROV, I.I.; RAVIN, V.I.; SAMOVER, M.L.; SERBINOVSKIY, G.V.; SYROMYATNIKOV, I.A.

Lev Veniaminovich, 1905: on his 60th birthday. Prom. energ. 20  
no.9:43 S '65. (MIRA 18:9)



NEKRASOV, A.M., inzh.; SERBINOVSKIY, G.V., inzh.

Principal trends in the development of electric power distribution networks. Izv. vys. ucheb. zav.; energ. 8 no.11:105-109 N '65. (MIRA 18:11)

1. Otdel elektrifikatsii Gosplana SSSR.

L 27947-66

ACC NR: AP6017709

SOURCE CODE: UR/0105/66/000/001/0086/0086

AUTHOR: Avilov-Karnaukhov, B. N.; Bol'sham, Ya. M.; Venikov, V. A.; Volobrinskiy, S. D.; Yermilov, A. A.; Konstantinov, B. A.; Knyazevskiy, B. Ye.; Minin, G. P.; Miller, G. R.; Mukoseyev, Yu. L.; Petrov, I. I.; Serbinovskiy, G. V.; Syromyatnikov, I. A.; Fedorov, A. A.; Kholmskiy, G. V.; Shagalov, A. S.; Chilikin, M. G.

ORG: none

TITLE: Prof. Georgiy Mikhaylovich Kayalov (on his 60th birthday)

SOURCE: Elektrichestvo, no. 1, 1966, 86

TOPIC TAGS: academic personnel, electric engineering personnel, electric equipment

ABSTRACT: In 1929, G. M. Kayalov completed the electrotechnical department of the Mechanical Faculty of the Novocherkassk Polytechnical Institute. Until 1947, he worked in the planning department of the Rostov Division of the All-Union Electrotechnical Union. In this time, he rose to the position of Chief Engineer. He directed the planning of a large number of important pieces of electrical equipment for various projects. He was active in the postwar restoration of many important industrial enterprises. He is the author of almost 70 published works, and has made a great contribution to modern, scientifically based methods of design and analysis of electrical loads for industrial equipment. He is on a number of commissions and in many scientific and technical societies. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 09 / SUBM DATE: none

UDC: 621.34

Card 1/1

B6G

VASIL'YEVA, M., inzhener; SERBO, H.<sup>M</sup>, inzhener

Fumigation and degassing of grain at storage points in  
Krasnodar Territory. Muk.-elev.prom. 21 no.4:22-23  
Ap '55. (MIRA 8:7)

i. Krasnodarskaya kontora Zagotzerno  
(Krasnodar Territory--Grain--Disinfection)

*SC-130, N.M.*

USSR/Cultivated Plants - Grains.

M-2

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91639

Author : Uvarov, A.M., Serbo, N.M.

Inst : The All-Union Scientific Research Institute of Corn and Its Products.

Title : Drying Seed Corn in the Grain.

Orig Pub : Soobshch. i ref. Vses. n.-i. in-t zerna i produktov ego pererabotki, 1957, vyp. 3, 15-17.

Abstract : The most advantageous way of drying the corn is not on the cob, but in the grain. It is suggested that one dry the threshed grain with an initial moisture of from 19 to 25% by up to 14 - 15% in two operations, with the temperature of the gas-air mixture at about 60° in the first operation and about 80° in the second operation. The temperature when heating the grains must not exceed 35 - 40°. -- V.A. Vnuchkova

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- 37 -

GABRIYELOV, Kh;SERBO, O.

Advantages of hard headings. Mast. ugl. 7 no.10:15 0 '58(MIRA 11:11)

|Karagandinskiy nauchno-issledovatel'skiy ugol'nyy institut.  
(Coal mines and mining)

ZHURINA, V.L., KOLBESLOVA, L.YA., PODOLSKAYA, N.N.

Structural strength of aqueous dispersions of clay minerals  
as dependent on the degree of waterproofing of the surface  
of particles. Koll. zhurn. 26 no.4:441-446 Aug '64.  
(MIRA 1719)

1. Institut Khimicheskoy Khimii AN SSSR, Moskva.

СМЕЛОВИЧ, В.

Speech

Work on the speech of students in the 8th and 9th grades. Scog. v shkole No. 1, 1953.

Monthly List of Russian Accessions, Library of Congress  
June 1953. UNCL.

BEVZIK, Yu.Ya. [deceased], SERBO, O.S.; EYDENZON, V.Ya.

Evaluation of the field development and that of levels within the seam using various flow sheets of coal mining. Nauch. trudy KNIUI no.14:3-9 '64. (MIRA 18:4)



BEVZIK, Yu.Ya. [deceased]; SERBO, O.S.; VORONIN, B.I.

Comparison of various coal mining methods for working thick seams.  
Nauch. trudy KNIUI no.14:78-80 '64.

Advantage of using mining systems with short mechanized faces in  
the working of medium thickness and thick seams in the Karaganda  
Basin. Ibid.:80-8? (MIRA 18:4)

BEVZIK, Yu.Ya. [deceased]; SERBO, O.S.; VORONIN, B.I.; EYDENZON, V.Ya.

Relation of a miner's labor productivity in each mine on the load  
per stope. Nauch. trudy KNIUI no.14:83-90 '64.

Work practices by the section-mine system. Ibid.:114-120 (MIRA 18:4)

BEVZIK, Yu.Ya. [deceased]; SERBO, O.S.; EYDENZON, V.Ya.

Mining the high thickness Feliks seam in the Karaganda Basin.  
Nauch. trudy KNIUI no.14:91-96 '64. (MIRA 18:4)

BOVZIK, Yu.Ya. [deceased]; VORONIN, B.I.; ZAGRANICHNYI, V.I.; SERBO, O.S.;  
USTINOVSKIY, M.N.; BYDENICH, V.Ia.

Working the Feliks seam in strips on the dip along its entire  
thickness. Nauch. trudy KNIUI no.14:102-109 '64. (MIRA 18:4)

BEVNIK, Yu.Ya. [deceased]; SERBO, O.S.; VORONIN, B.I.; BYDUNZON, V.Ya.;  
ZAGRANICHNYY, Yu.Ya.

Wide-bench mining of coal. Nauch. trudy KNTU no.14:109-114  
1964. (MIRA 18:4)

BEVZIK, Yu.Ya. [deceased] SERBO, O.S.; ZAGRANICHNIY, Yu.Ye.

Possibilities of using the KTU-2 unit in the Karaganda Basin.  
Nauch. trudy KNIUI no.14:96-101 '84. (MIRA 18:4)

SERBO, S. V. et al. 1965.

Asymptotic behavior of the scattering amplitude in quantum electrodynamics with a heavy photon. Vest. LGU 20 no.16:36-40 '65.  
(MIRA 18:9)

SERBU, Constantin, ing.

Results and conclusions of measurements of the reflection  
coefficient of ionospheric waves carried out during the sun  
eclipse of February 15, 1961. Telecommunicatii 6 no.6:247-256  
N-D '62.



RUMINANT, Farm Animals, Horses.

Q-2

Abs Jour : Ref Zhur - Biol., No 7, 1958, 30932

Author : Marinescu I., Varachiu N., Domilescu C., Nemteanu St.,  
Serbu Eugenia, Draghici C., Corneci I., Moldoveanu C.

Inst : \_\_\_\_\_

Title : The Influence of Feeding with the Grain of Indian Corn  
upon the Organism of Horses and on Their Blood Indexes  
During Work.  
(Vliyaniye kormleniya zernom kukuruzy na organizm losh-  
di i na pokazateli krovi ikh v rabote).

Orig Pub : Probl. zootehn., 1957, No 4, 11-25.

Abstract : The experiments, accompanied by clinical observations  
and systematic blood analyses, demonstrated the possi-  
bility of the substitution of Indian corn for oats in  
the rations of draft horses.

Card 1/1

- 27 -

SERBUL, Grigoriy Illarionovich; KREMENETSKAYA, I.I., red.; BARANOVA,  
~~N.N., tekhn. red.~~

[Equipment for cabinetwork] Prispособleniia dlia obrabotki  
stoliarnykh izdelii. Moskva, Vses. uchebno-pedagog. izd-vo  
Proftekhizdat, 1961. 15 p. (MIRA 15:2)

1. Master proizvodstvennogo obucheniya professional'no-tekhnicheskogo uchilishcha No.4 g. Stalinabada (for Serbul).  
(Cabinetwork—Equipment and supplies)

USSR/ Electronics - Radio interferences

Card 1/1 Pub. 89 - 24/40

Authors : Serbulenko, M.

Title : Reduction of interferences

Periodical : Radio 10, page 33, Oct 1954

Abstract : This is a short article describing a bridge-filter method for reducing the characteristic "howling" type interference caused by either electrical or acoustical feedback in radio receivers. Circuit diagram; graph.

Institution: .....

Submitted: .....

SERBULENKO, M.

Prevention of interference noises. Radio no.10:33 0 '54.(MLRA 7:11)  
(Radio--Interference)

Serbulyenko, M. G.

ZHURNAL TEKHNIЧЕСКОИ ФИЗИКИ

Journal of Technical Physics

Vol 26, No. 2, April, 1956

GUTIN, S. S.,  
PROCHAKOV, L. L.,  
SERBULENKO, M. G.:

On Measuring the Real Surface of Metal (During the Process of Pickling Aluminium Foil in Condenser Manufacture).

A method was developed based on the double electrical layer at the boundary of two phases for determining the relative magnitude of the real surface of a metal which is applicable for continuous measurement of the pickling coefficient of aluminium foil during the process of dynamic pickling. The here described method permits to make the correction of the pickling process fully automatic by changing step-down gear currently used for regulating the speed of the foil by a d.c. motor, the speed of rotation of which can be controlled more easily. The here described method permits to study in detail the levelling of the pickled surface of the foil during the process of formation and the degree of coarseness, particularly of rolled aluminium foil. The measuring error does not exceed 3 to 5% of the mean value.

VAK OF 17

SERBULENKO, M. G.

621.319.45.002.2 1010  
Measurement of the True Surface of  
a Metal. — S. S. Gulin, L. L. Prochev &  
M. G. Serbulenko. (Zh. tek. fiz., April  
1956, Vol. 26, No. 4, pp. 863-869.) A method  
is proposed for rapid measurement of the  
surface area of aluminium foil for use in  
electrolytic capacitors during the electro-  
chemical etching process.

14E2c

201-111

GUTIN, S.S.; PROCHAKOV, L.L.; SERBULENKO, M.G.

Measuring the actual surface of metals. Zhur.tekh.fiz. 26 no.4:  
865-869 Ap '56. (MLRA 9:8)

1. Tomskiy politekhnicheskiy institut.  
(Surfaces (Technology)--Measurement)  
(Metals--Finishing)

SERBULENKO, M. G.

3  
Measurement of the true surface area of a metal. S. S.  
Gutin, L. L. Prochakov, and M. G. Serbulenko. Soviet  
Phys. Tech. Phys. 1, 851-5(1957)(English translation).  
See C.A. 50, 14301k. B.M.R.

MT



SOV/139-58-4-15/30

AUTHORS: Gorodetskiy, A.F., Gutin, S.S., Mel'nik, I.G.,  
Serbulyenko, M.G. and Shadrin, V.S.

TITLE: ~~Some Electrical Properties of Thin Layers of Tellurium~~  
and Germanium (Nekotoryye elektricheskiye svoystva  
tonkikh sloev tellura i germaniya)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika,  
1958, Nr 4, pp 91-96 (USSR)

ABSTRACT: The dependence of resistivity on temperature, voltage-  
current characteristics and limiting current densities  
was determined for thin layers of tellurium and germanium  
condensed in vacuo onto bases of various materials at  
various temperatures. Some relations between resistivity  
and deformation were also established. The main  
conclusions, derived from measurements described below, were:  
1) The resistivity of germanium films is fairly stable  
with time. The change in resistivity with deformation  
is about 2.3% for a relative deformation of  $4.5 \times 10^{-4}$ .  
2) The resistivity of tellurium films is not stable.  
Mechanically such films are not durable. The change in  
resistivity with deformation is about half that of  
germanium films.

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SOV/139-58-4-15/30

Some Electrical Properties of Thin Layers of Tellurium and Germanium

Preparation of Specimens. The thin films were produced by condensation in a vacuum of the order of  $1 \times 10^{-4}$  to  $5 \times 10^{-4}$  mm Hg in the form of strips 4 mm across and 30 mm long. The ends of the strips were overlapped for 1 to 2 mm by  $5 \times 9$  mm rectangles of metal, also vacuum-condensed, to which copper wires were soldered. The metal contacts for tellurium were always of nickel, but tin was also tried for germanium. The bases used were mainly glass, but in special cases polymerized VL-7 lacquer on a metal disc, mica and fused quartz were tried. The bases were heated by radiation from a current-carrying tantalum wire placed above the base and the temperature was controlled by a copper-constantan thermocouple attached to the surface of the base. The tellurium from which the specimens were made had less than  $10^{-4}\%$  impurities. The germanium used had a specific resistivity of 4 to 20 Ohm.cm. In all cases the conductivities were of the hole type.

Experimental Results and Discussion.

a) Tellurium condensed onto a cold base. Fig.1 shows Card 2/8 the log of the resistivity (which was of the order of some

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Some Electrical Properties of Thin Layers of Tellurium and Germanium

hundred thousand Ohms) plotted against reciprocal of the absolute temperature. The resistivity in air at a given temperature clearly increases after thermal cycling, as it also does for specimens stored at room temperature. This increase is irreversible.

b) Tellurium condensed onto a hot base (150-160°C).

Fig.2 shows again a rapid resistivity increase after an initial thermal cycle. There is no further change after some 4 to 5 thermal cycles.

Fig.3 shows the difference in characteristics for changes in the atmospheric environment. Experiments started at the moment of preparation of the specimen and carried out in vacuo are shown by the curves beginning at the asterisk and marked by white cycles on the graph. These characteristics are approximately two straight line segments with a break at 90°C. After each cycle a lower resistance was obtained. However, after leaving the specimen in vacuo at 130°C for 30 mins, the resistivity increased - without reaching its initial value. When air was admitted

Card 3/8 into the system resistance fell and the curves with the

SOV/139-58-4-15/30

Some Electrical Properties of Thin Layers of Tellurium and Germanium

black dots were obtained. The final curve was straighter and had a smaller gradient. When the same specimen was examined after 10 days in air, the curves at the bottom of Fig.3 were obtained. These are approximately straight lines. Subsequent evacuation of the system did not reproduce the original properties of the specimen, though its resistance increased.

c) Germanium. Specimens condensed onto a cold base showed resistivities of the order of 10 megohms, while those condensed onto bases heated to 500-550°C showed resistivities between 7 and 30 kOhms (most lay between 10 and 16). It can be verified that in the hot-base specimens the layer structure is crystallographic, (see Refs 1 and 2). Specimens condensed in the same experiment onto bases of glass, mica and fused quartz showed practically identical resistivities, of the order of 12 kOhms. The resistivities of all specimens showed little change after ageing in air: 1.8% increase after 40 days. The resistivity temperature relationship was

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close to exponential between room temperature and 130°C.

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Some Electrical Properties of Thin Layers of Tellurium and Germanium

The points obtained by repeated thermal cycling lay fairly accurately on a single characteristic curve. It is noted in (Ref 3) that there is a significant change in resistivity for extension or compression of specimens of PbS. Furthermore, there are theoretical (Refs 4,5) and experimental (Ref 6) grounds for a deformation-resistivity relationship for germanium monocrystals. The deformation in the experiments, on thin layers of Te and Ge, here described, was produced by the method described in (Ref 3) and measured optically to an accuracy of  $1\mu$ . For tellurium each deformation cycle produced an irreversible increase in resistance. A single cycle is shown in Fig.4. For germanium the results were independent of the cycling history, and are shown in Fig.5.

Current Densities and Voltage-Current Characteristics.

Specimen thicknesses were measured by an interference microscope type MII-4 to an accuracy of  $0.027\mu$ . The tellurium specimens had thicknesses between  $0.230$  and  $0.430\mu$ , the germanium between  $0.18$  and  $0.3\mu$ . With poor

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SOV/139-58-4-15/30

Some Electrical Properties of Thin Layers of Tellurium and Germanium

heat dissipation (measurement in air for specimens on glass bases) current densities of  $600 \text{ A/cm}^2$  were obtained for tellurium and  $200 \text{ A/cm}^2$  for germanium. The static voltage-current characteristics of tellurium and germanium were strictly linear for current densities up to  $300 \text{ A/cm}^2$  and  $400 \text{ A/cm}^2$  respectively. The dynamic characteristics, taken on an oscilloscope, were strictly linear; increasing voltage and the corresponding heating changed the gradient of the characteristic.

Discussion. Takemaro Sakurai et al. (Ref 7) have already noted the irreversible changes in resistivity of thin tellurium layers condensed onto cold bases. They explained the effect by stating that such layers have a micro-crystalline structure with amorphous patches between crystals and that heating causes the crystals to grow at the expense of the amorphous patches. The effect does not occur in layers condensed onto hot bases at temperatures below that at which the specimen was condensed, which is in accordance with the above

Card 6/8 explanation. Such specimens behave in the same way as

SOV/139-58-4-15/30

Some Electrical Properties of Thin Layers of Tellurium and Germanium

those cut from the solid. The authors point out that this theory is too simple to explain all the effects noted in the experiments described: for example, the coincidence of characteristics for specimens measured below 90°C in vacuo with those cut from the solid. The effects can be explained by introducing two additional considerations: first, the properties of surface levels, described by E. Clark (Ref 8), which explain the break in characteristics at 90°C when all surface levels are occupied and, secondly, the additional acceptor levels produced by oxygen at the layer surface. Subsidiary considerations are the effect of water vapour which may affect the surface ionic conductivity and the diffusion of oxygen into the depths of the specimens creating conduction electron traps. For tellurium the noise level makes measurement difficult.

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SOV/139-58-4-15/30

Some Electrical Properties of Thin Layers of Tellurium and Germanium

Paper presented at the Conference of higher educational establishments on dielectrics and semiconductors, Tomsk, February, 1958.

There are 5 figures and 8 references, 2 of which are Soviet, 6 English.

ASSOCIATION: Novosibirskiy elektrotekhnicheskiy institut  
(Novosibirsk Electro-technical Institute)

SUBMITTED: March 12, 1958

Card 8/8



VESNOVSKIY, D.K.; DYACHUK, A.F.; SERBULENKO, M.G.

Automatic semiconductor devices for the control of signal lights.  
Izv.vys.ucheb.zav.; radiotekh. no.6:741-742 H-D '58.  
(MIRA 12:4)

1. Rekomendovano Tomskim ordena Trudovogo Krasnogo Znaneni  
politekhnicheskim institutom imeni S.M.Kirova.  
(Signals and signaling) (Transistors)

SERBULENKO, M.G.; MATOSHIN, V.M.

Spectrum analyzer with an electronic function converter. Prib.  
i tekhn. eksp. no.3:84-86 My-Je '60. (MIRA 14:10)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.  
(Electronic differential analyzers)

SERBULENKO, M.G.

83352

S/139/60/000/004/009/033  
E201/E591

9.4340

AUTHORS:

Griika, V.M., Gutin, S.S., Matoshin, V.M. and  
Serbulenko, M.G.

TITLE:

- The Problem of Electrical Forming of Germanium Point-  
Contact Diodes *26*

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy, Fizika,  
1960, No.4, pp.98-106

TEXT:

Mass-produced germanium point-contact diodes of D-2 type are formed by single 50 c/s pulses of 0.05 sec duration and  $\sim 1.5$  A amplitude (35-70 V). Such forming produces diodes whose properties differ from sample to sample, because the result of forming is governed by the initial properties of the devices. To investigate the problem the following procedures were followed. Instead of a single pulse the authors used either a series of short (millisecond) pulses of the same amplitude, or a series of short pulses with the amplitude increasing step-wise at each pulse. After each pulse various parameters of the diodes were measured in order to find out how the rectifying contact was affected by forming. The measured parameters included: (1) capacitance of the contact in the blocking (reverse) direction, (2) forward

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S/139/60/000/004/009/033

E201/E591

The Problem of Electrical Forming of Germanium Point-Contact Diodes

current ( $J_{np}$ ), (3) reverse voltage ( $U_{obp}$ ), (4) slope of the current-voltage characteristic at near-zero currents, (5) photo-e.m.f. The circuitry of the apparatus is given in Figs.1-3 and some of the results in Figs. 4-5. The latter two figures give the dependences of the reverse voltage, forward current and diode capacitance (C) on the number of forming pulses. The results obtained by the authors showed that it was necessary to produce a molten crystal region at the metal-crystal boundary, without melting the metal point. The authors recommend forming by a series of short pulses whose current amplitudes rise step-wise. After each pulse both  $U_{obp}$  and  $J_{np}$  should be measured. When the desired values of these two quantities are reached, forming should be stopped. 86% of the samples had the required parameters when this pulse sequence method was used. The authors developed automatic apparatus for pulse-sequence forming of point-contact germanium diodes. This was tried out under industrial conditions and was found satisfactory. There are 5 figures and 9 references:

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83352

S/139/60/000/004/009/033  
E201/E591

The Problem of Electrical Forming of Germanium Point-Contact Diodes  
6 Soviet and 3 English.

ASSOCIATION: Novosibirskiy elektrotekhnicheskiy institut  
(Novosibirsk Electro-Technical Institute)

SUBMITTED: September 23, 1959

X

Card 3/3

SENBULENKO, M.G.

Correlation method for interpreting two-dimensional potential fields.  
Geol. i geofiz. no.11:109-113 '60. (MIRA 14:2)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,  
Novosibirsk.

(Prospecting--Geophysical methods)

SERBULENKO, M.G.

Correlative interpretation of the highest derivatives of two-dimensional potential fields. Geol. i geofiz. no.4:109-110 '61.

(MIRA 14:5)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

(Magnetism, Terrestrial)

(Gravity)

SERBULENKO, M.G.

Constructing an optimum linear filter for the division of potential fields. Geol.i geofiz. no.12:80-94 '61. (MIRA 15:5)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,  
Novosibirsk.  
(Prospecting---Geophysical methods)



S/210/62/000/006/001/001  
1004/1250

AUTHORS: M. G. Serbulenko, M. G. and Gusev, Yu. M.

TITLE: Photoformer differentiator and its use for interpretation of geophysical data

PERIODICAL: Geologia i geofizika, no. 6, 1962, 104-109

TEXT: A simple device is described for differentiation of functions given in form of graphs, which shows gradients of functions, independently of their physical meaning. The device is intended for processing the data of an aeromagnetic survey. The electronic circuit of the device consists of a function generator with an output voltage proportional to the input curve and of a differentiating unit together with a zero marking circuit. Calibration of the device and a check of differentiation linearity are carried out by introducing a mask, with its edge cut in the shape of a sawtooth curve. To correlate the graph with a map several narrow cuts are made on the curve. The time necessary for processing one 150 km long profile in the 1 : 200,000 scale takes 5 to 8 minutes. The accuracy of the values of the derivatives obtained is  $\pm 5\%$ . The device was used for processing the geological data from Aleksandrovskii swell. Maps of the distribution of magnetic field  $\Delta T_a$  were thus supplemented with the maps of gradients  $\Delta T_s$ , to be compared with the graphical representation of the structure of the area. The iso-curves of  $\Delta T_s$  help in the analysis of the data and make possible a more thorough interpretation of the structural and tectonic character of areas covered by thick sedimentary layer. There are 7 figures and 4 references.

Card 1/2

Photoformer differentiator...

S/210/62/000/006/001/001  
I004/I250

ASSOCIATION: Institut geologii i geofiziki Sibirskogo otdeleniya AS USSR, Novosibirsk (Institute of  
Geology and Geophysics of the Siberian branch of Academy of Sciences of USSR)

SUBMITTED: November 17, 1961

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Card 2/2

SERBULENKO, M.G.

Resolving power of mathematical methods of the separation of  
potential fields. Geol.i geofiz. 4:100-112 '62. (MIRA 15:8)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,  
Novosibirsk.

(Prospecting-Geophysical methods)

ACCESSION NR: AT4044074

S/2994/63/000/021/0022/0075

AUTHOR: Karatayev, G. I., Serbulenko, M. G., Gusev, Yu. M., Kolmogorova, P. P., Luk'yanova, N. N., Puchkov, Ye. P., Sary\*cheva, Yu. K.

TITLE: Solving some of the problems of geophysical prospecting on electronic computers

SOURCE: AN SSSR. Sibirskoye otdeleniye. Institut geologii i geofiziki. Trudy\*, no. 21, 1963, Geofizicheskiy sbornik. no. 4: Primeneniye elektronny\*kh tsifrov\*kh mashin pri reshenii nekotory\*kh zadach geofiziki (Geophysical papers, no. 4: Using electronic computers in solving some geophysical problems), 22-75

TOPIC TAGS: geophysical prospecting, computer programming, gravity, magnetic field, magnetic prospecting

ABSTRACT: When computers are used, more realistic assumptions may be made to replace the idealized formulations which give inadequate interpretations of geophysical anomalies. In the present paper, a classification is given of the main problems of geophysical interpretation. Examples of computer application to geophysical problems include: 1. transformation of the observed anomalous field into the upper half-space; 2. calculation of the field in the lower half-space; 3. computing of vertical and horizontal

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ACCESSION NR: AT4044074

derivatives of various orders from observed anomalies; 4. distinguishing components which reflect geological structure in the study of crystal structure; and 5. constructing contact surfaces and determining the elements of perturbing masses. The authors then deal with calculation of the improper integrals encountered in geophysical interpretation and estimate the errors resulting, using model fields for specific cases. Recommended formulas are given for two and three-dimensional problems. Integral representation of anomalous potential fields is then treated, and formulas are derived and tabulated for computing the coefficients of the cubature formula and the quadratic sum. Detailed instructions are given for construction of tangential gravitating planes, correction for the effects of local relief, and the preparation of structural and topographic maps for computer processing. The following computer programs are listed: 1. evaluating anomalous fields in the lower and upper half-space; 2. computing vertical gradients of various orders; 3. calculating horizontal derivatives of any other; 4. calculating functions orthogonal to observed functions and values of regional anomalies; 6. filtering errors in observations; 7. solution of the direct problem of gravitational prospecting for the case of one or several tangential gravitating surfaces; 8. obtaining constants of contact

Card 2/4

ACCESSION NR: AT4044074

surfaces; 9. determining lodes and the physical nature of perturbations; 11. averaging anomalous fields; 12. evaluating errors in relief. Brief descriptions are given of programs for solving the quadrature and cubature formulas, a subroutine for formulating true addresses on the grid, and a program for calculating the correlation functions for several paths traced out in a field. The theoretical predictions were confirmed. Most of the computer time was spent on reading in and punching out data. This work makes it possible to solve complex problems relating to the correlation of morphologies of geophysical fields of different origin. "Acknowledgements are given to E. E. Fotiadi, corresponding member of the SSSR Academy of Sciences, and to Prof. A. I. Zaborovskiy, R. F. Volodarskiy and T. I. Landa of MGU (Moscow State University), as well as to the Vy\*chislitel'ny\*y tsentr SO AN SSSR (Computer Center, Siberian Division, SSSR Academy of Sciences). Orig. art. has: 3 tables, 7 figures and 145 formulas.

ASSOCIATION: Institut geologii i geofiziki, Sibirskoye otdeleniye, Akademiya Nauk SSSR (Institute of Geology and Geophysics, Siberian Division, SSSR Academy of Sciences)

Card 3/4

S/169/63/000/002/090/127  
D263/D307

AUTHORS: Serbulenko, M. G. and Gusev, Yu. M.

TITLE: An electronic analog differentiator and its application in the interpretation of geophysical data

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 16, abstract 2D93 (Geologiya i geofizika, 1962, no. 6, 104-109)

TEXT: A description is given of an electronic analog machine intended for the differentiation of graphically supplied curves. The apparatus was developed and tested at the Institut geologii i geofiziki SO AN SSSR (Institute of Geology and Geophysics of the Siberian Branch of the AS USSR). As an example, the authors give a chart of the field of horizontal gradients  $\Delta T_s$  for one of the regions lying between Ob' and Irtysh rivers, constructed with the aid of the differentiator from available data obtained by aeromagnetic measurements of  $\Delta T$ . The possibility of obtaining the gradients of required functions without supplementary calculations and field ob-

Card 1/2

An electronic analog ...

S/169/63/000/002/090/127  
D263/D307

servations allows a fuller analysis of existing geophysical data.  
The derivatives are obtained with an accuracy of  $\pm 5\%$ . [Abstrac-  
ter's note: Complete translation.]

Card 2/2



SERBULENKO, M.G.

Method of the study of the characteristics of a potential.  
Geol. i geofiz. no.5:127-130 '63. (MIRA 16:8)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,  
Novosibirsk.

(Potential, Theory of)

SERBULENKO, M.G.; SOLOV'YEV, O.A.

Localization of the characteristics of potential fields from  
observed anomalies and the accuracy of analytic continuations in  
the lower discontinuity. Geol.i geofiz. no.7:112-116 '63.  
(MIRA 16:10)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,  
Novosibirsk.

KARATAYEV, G.I.; SERBULENKO, M.G.; GUSEV, Yu.M.; KOLMOGOROVA, P.P.;  
LUX'YANOVA, N.N.; PUCHKOV, Ye.P.; SARYCHEVA, Yu.K.

Solution of some problems in gravity and magnetic prospecting  
by means of computers. Trudy Inst. geol. i geofiz. Sib. otd.  
AN SSSR no.21:22-88 '63. (MIRA 17:11)

ARMSTRONG, R.O.

Precise separation of the potential fields of inner and outer  
sources relative to a surface. Geol. i geofiz. no. 6:111-113 '65.  
(MIRA 18:8)  
I. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,  
Novosibirsk.

SERBULENKO, M.G.

Relationship among various linear transformations during the  
optimum distribution of potential fields. Geol. i geofiz.  
no.4:137-144 '65. (MIRA 18:8)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN  
SSSR, Novosibirsk.

SERBULOV, A.F.

Tractor-mounted platform for vegetable harvesting. Kons. i ov.  
prom. 13 no.9:29-31 S '58. (MIRA 11:10)

1. Moldavskiy nauchno-issledovatel'skiy institut oroshayemogo  
zemledeliya i ovoshchevodstva. Kons. i ov. prom. 13 no.9:29-31  
(Tomatoes--Harvesting) (Harvesting machinery)

30(1) SOV/99-59-7-6/9  
AUTHOR: Berdyshev, V. D., and Serbulov, A. F. (Kishinev)  
TITLE: Simplified Pump Station  
PERIODICAL: Gidrotekhnika i Melioratsiya, 1959, Nr 7, pp 41-42 (USSR)  
ABSTRACT: The pump stations used in Moldavia near the rivers are basically of two types: Those built on the river bank and those situated on pontoons. Because the water level in some rivers of this district undergoes considerable changes, the stations located at the riverside must be protected by a dam against the damage, which may be incurred during the period of river overflow. In this connection it has been established that the cost of protective dams or, in case of floating pump stations, the building of pontoons, represents the greatest part of expenditure for erection of pumping installations. In 1958 the Scientific Research Institute of Moldavia proposed a new type of pump station. The outstanding features of it are: 1) The pumping installation is divided into two separate units; 2) The first unit comprises the suction equipment consisting of a pump, electromotor

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Simplified Pump Station

and fan. This equipment is protected from the overflow by a round metal tank, 2.5 m high and 2.1 m in diameter. The motor and pump are mounted on the same frame. The tank is located directly at the riverside, but it is high enough to prevent penetration of water even when the river water level attains its highest point; 3) The second unit is situated in another building some distance away from the tank, at a site which never overflows. It connects the rest of pumping equipment and armature; 4) Both units are connected by a pipeline consisting of light, thinwalled pipes, which can be dismantled during the winter. The advanced features of this layout are its simplicity of construction and low cost of erection. There are 1 table and 1 photograph.

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ACCESSION NR: AR5006830

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SOURCE: Ref. zh. Khimiya, Abs. 1884

AUTHOR: Kovrizkho, L.F.; Rayevskiy, A.B.; Serbulova, Z.A.

TITLE: Inhibition of Omega-polymerization by aromatic compounds

CITED SOURCE: Tr. Labor. khimii vysokomolekul. soedineniy. Voronezhsk. un-t, vyp. 2, 1963, 68-71

TOPIC TAGS: Omega polymer, Omega polymerization, nitrobenzene, aminophenol, divinylstyrene polymerization, nitrophenol, nitrogen oxide

TRANSLATION: As inhibitors of the  $\omega$ -polymerization of divinylstyrene, the authors used nitrobenzene, m-dinitrobenzene, p-dinitrobenzene, m-nitrophenol, 4-nitro-2-aminophenol, o-aminophenol, p-aminophenol and 4-chloro-2-aminophenol.  $\omega$ -Polymerization was carried out in ampoules at 50C. The nitro compounds tested all increased the induction period and decreased the rate of polymerization; the aminophenols also increased the induction period but had no effect on the rate of  $\omega$ -polymerization. Treatment of primers of  $\omega$ -polymer with N-oxides at approximately 20C did not lead to complete deactivation.

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SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

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